

**California Department of Forestry & Fire Protection  
Office of the State Fire Marshal  
CFIRS PROGRAM**

**1998 FIREWORKS INJURIES  
Hospital Emergency Room Survey  
June 17 – July 16**

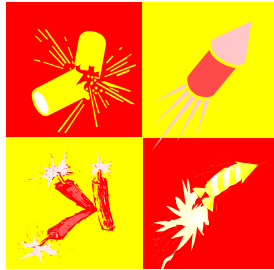


On behalf of the California Fire Service, the Office of the State Fire Marshal commends the participating hospitals, the California Hospital Association for the endorsement and the medical professionals for their continuing support of this data collection process. Their cooperation is essential to the credibility and validity of this annual report. A list of these participating hospitals is included in the following pages.

This report describes the results of the 1998 Annual Fireworks Injury Survey that is conducted each year upon completion of the Fourth-of-July holiday season.

Neighborhood medical clinics are not included in this survey. These incident records are collected from hospital emergency rooms only, and may not reflect the total number of injuries actually experienced. The number of hospitals with emergency rooms that participated in last year's survey was 202, compared to 180 in 1998. We have conducted this study with the hospital emergency rooms since 1982. Of the 161 injuries reported, Illegal fireworks accounted for 45%, with Safe & Sane being identified as 35%, and Unknown as 20%.

The number sampling indicates that illegal fireworks continue to be the major contributor to injuries that result in emergency medical treatment. This would seem to indicate that the problem is continuing in spite of both increased enforcement and educational efforts.



# Hospitals Reporting

## ALAMEDA COUNTY

Children's Hospital  
Kaiser Permanente – Hayward  
Summit Medical Center\*  
Valley Care Medical Center  
Washington Hospital

## AMADOR COUNTY

Sutter Amador Hospital\*

## BUTTE COUNTY

Enloe Medical Center – Cohasset\*  
Feather River Hospital\*

## CALAVERAS COUNTY

Mark Twain St. Joseph's Hospital\*

## COLUSA COUNTY

Colusa Community Hospital

## CONTRA COSTA COUNTY

Doctors Medical Center – San Pablo\*  
Kaiser Permanente – Walnut Creek  
Mt. Diablo Medical Center  
San Ramon Regional Medical Center\*

## DEL NORTE COUNTY

Sutter Coast Hospital

## EL DORADO COUNTY

Barton Memorial Hospital\*

## FRESNO COUNTY

Clovis Community Hospital  
Fresno Community Hospital  
Sanger General Hospital\*  
Selma District Hospital

## HUMBOLDT COUNTY

Redwood Memorial Hospital\*  
Southern Humboldt Community Hospital\*

## IMPERIAL COUNTY

El Centro Regional Medical Center\*  
Pioneers Memorial Hospital

## INYO COUNTY

Northern Inyo Hospital  
Southern Inyo Hospital\*

## KERN COUNTY

Kaiser – Bakersfield  
Ridgecrest Regional Hospital\*

## KINGS COUNTY

Central Valley General Hospital\*

## LAKE COUNTY

Redbud Community Hospital\*

## LASSEN COUNTY

Lassen Community Hospital\*

## LOS ANGELES COUNTY

Arcadia Methodist Hospital  
Cedars-Sinai Medical Center\*  
Coast Plaza Doctors Hospital\*  
Columbia West Hills Medical Center\*  
Community and Mission Hospital  
Daniel Freeman Marina Hospital\*  
Daniel Freeman Memorial Hospital  
Downey Community Hospital  
Encino Hospital\*  
Glendale Adventist Medical Center  
Glendale Memorial Hospital\*  
Henry Mayo Newhall Memorial Hospital  
Hollywood Community Hospital\*  
Huntington Memorial Hospital  
Kaiser – Harbor City  
Kaiser – Los Angeles  
Lakewood Regional Medical Center  
Lancaster Community Hospital  
Long Beach Community Medical Center  
Memorial Hospital of Gardena  
Midway Hospital\*  
Mission Community Hospital\*  
Monrovia Community Hospital\*  
Monterey Park Hospital\*  
Pomona Valley Hospital  
Presbyterian Intercommunity Hospital  
Providence Holy Cross Medical Center\*  
Providence St. Joseph Medical Center\*  
St. Francis Medical Center

## LOS ANGELES COUNTY (CONT.)

St. Jude Hospital  
San Gabriel Valley Medical Center  
San Pedro Peninsula Hospital\*  
Santa Marta Hospital  
Santa Teresita Hospital  
Tarzana Hospital  
Torrance Memorial Hospital  
Tri-City Regional Medical Center\*  
Valley Presbyterian Hospital\*  
Vencor Hospital – Los Angeles\*  
White Memorial Medical Center\*  
Whittier Hospital Medical Center\*

## MADERA COUNTY

Madera Community Hospital\*

## MENDOCINO COUNTY

Howard Memorial Hospital\*  
Mendocino Coast District Hospital\*

## MERCED COUNTY

Emanuel Medical Center  
Mercy Hospital

## MODOC COUNTY

Surprise Valley Hospital\*

## MONO COUNTY

Mammoth Hospital\*

\*Hospitals that **did not** have any fireworks injuries during the 1998 fireworks season



#### **MONTEREY COUNTY**

Community Hospital of Monterey Peninsula  
Salinas Valley Memorial Hospital

#### **NAPA COUNTY**

Holderman Hospital\*

#### **ORANGE COUNTY**

Anaheim Memorial Medical Center  
Chapman Medical Hospital\*  
Coastal Communities Hospital\*  
Fountain Valley Regional Hospital  
Huntington Beach Hospital  
Irvine Medical Center\*  
Kaiser Permanente – Anaheim  
La Palma Intercommunity Hospital  
Los Alamitos Medical Center  
Martin Luther Hospital\*  
Orange Coast Memorial Medical Center\*  
Placentia Linda Hospital  
St. Joseph Hospital\*  
St. Jude Hospital  
San Clemente Hospital and Medical Center  
South Coast Medical Center\*  
UCI Medical Center\*  
Western Medical Center – Anaheim

#### **PLUMAS COUNTY**

Seneca District Hospital\*

#### **RIVERSIDE COUNTY**

Corona Regional Medical Center\*  
Desert Regional Medical Center\*  
Eisenhower Medical Center\*  
Kaiser Permanente – Riverside  
Palo Verde Hospital  
Parkview Community Hospital\*  
Riverside County Regional Medical Center  
Sharp Healthcare – Murietta\*

#### **SACRAMENTO COUNTY**

Kaiser – Sacramento  
Mercy American River Hospital\*  
Mercy General Hospital  
Mercy Hospital – Folsom  
Mercy San Juan Hospital  
UCD Medical Center

#### **SAN BENITO COUNTY**

Hazel Hawkins Hospital\*  
Santa Teresa Community Hospital

#### **SAN BERNARDINO COUNTY**

Barstow Community Hospital\*  
Bear Valley Community Hospital\*  
Chino Valley Medical Center  
Desert Valley Hospital\*  
Hi Desert Medical Center\*  
Kaiser Permanente – Fontana  
Loma Linda University Medical Center  
Redlands Community Hospital\*  
St. Mary Regional Medical Center\*  
San Bernardino County Medical Center  
U S Family Care Medical Center\*

#### **SAN DIEGO COUNTY**

Fallbrook Hospital District\*  
Kaiser Permanente – San Diego  
Paradise Valley Hospital\*  
Pomerado Hospital\*

#### **SAN DIEGO COUNTY (CONT.)**

Scripps Hospital – East County\*  
Scripps Memorial Hospital – La Jolla\*  
Sharp Chula Vista Medical Center  
Sharp Coronado Hospital\*  
Villa View Community Hospital\*

#### **SAN FRANCISCO COUNTY**

California Pacific Medical Center\*  
Davies Medical Center\*  
St. Mary's Medical Center\*  
UC Stanford Health Care\*

#### **SAN LUIS OBISPO COUNTY**

Arroyo Grande Community Hospital\*  
San Luis Obispo General Hospital\*  
Sierra Vista Regional Medical Center\*  
Twin Cities Community Hospital

#### **SAN MATEO COUNTY**

Kaiser – South San Francisco  
Mills Memorial Hospital  
Sequoia Hospital\*  
Seton Coastside Hospital\*

#### **SANTA BARBARA COUNTY**

Goleta Valley Cottage Hospital\*  
Lompoc District Hospital\*  
St. Francis Medical Center\*

#### **SANTA CLARA COUNTY**

Community Hospital of Los Gatos  
Good Samaritan Hospital\*  
Kaiser Permanente – Santa Clara\*  
Santa Clara Valley Medical Center\*  
South Valley Hospital  
UCSF/Stanford Health Services\*

#### **SANTA CRUZ COUNTY**

Dominican Hospital

#### **SHASTA COUNTY**

Redding Medical Center\*

#### **SISKIYOU COUNTY**

Fairchild Medical Center

#### **SONOMA COUNTY**

Healdsburg General Hospital\*  
Palm Drive Hospital\*  
Sutter Medical Center of Santa Rosa  
Warrack Hospital\*

#### **STANISLAUS COUNTY**

Emanuel Medical Center  
Memorial Medical Center  
Oak Valley Hospital District

#### **TULARE COUNTY**

Kaweah Delta  
Lindsay District Hospital\*  
Sierra View Hospital  
Tulare District Healthcare System

#### **VENTURA COUNTY**

Community Memorial Hospital\*  
Los Robles Regional Medical Center  
Ojai Valley Community Hospital\*  
St. John's Regional Medical Center\*  
Simi Valley Hospital  
Ventura County Medical Center\*

#### **YOLO COUNTY**

Sutter Davis Hospital

#### **YUBA COUNTY**

Rideout Memorial Hospital

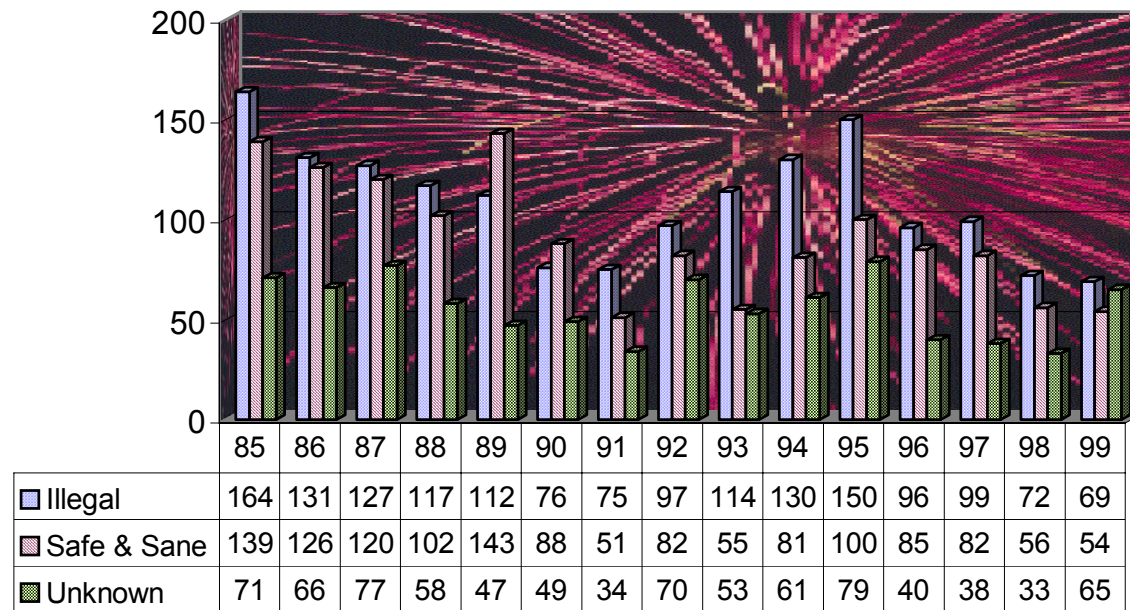


\*Hospitals that **did not** have any fireworks injuries during the 1998 fireworks season

# FIREWORKS INJURIES

## Hospital Emergency Room Survey

**June 17 - July 16, 1998**



**Hospital Injury Data**  
**INJURIES BY FIREWORKS CLASSIFICATION BY COUNTY**  
June 17 thru July 16, 1998

| COUNTY             | TOTAL BY<br>COUNTY | Classification |           |           |
|--------------------|--------------------|----------------|-----------|-----------|
|                    |                    | LEGAL          | ILLEGAL   | UNKNOWN   |
| 01 Alameda         | 13                 | 5              | 7         | 1         |
| 06 Colusa          | 1                  | 0              | 1         | 0         |
| 07 Contra Costa    | 3                  | 0              | 3         | 0         |
| 08 Del Norte       | 1                  | 0              | 0         | 1         |
| 10 Fresno          | 7                  | 4              | 3         | 0         |
| 13 Imperial        | 3                  | 0              | 1         | 2         |
| 14 Inyo            | 1                  | 1              | 0         | 0         |
| 19 Los Angeles     | 38                 | 16             | 17        | 5         |
| 24 Merced          | 3                  | 0              | 2         | 1         |
| 27 Monterey        | 3                  | 0              | 1         | 2         |
| 30 Orange          | 16                 | 11             | 2         | 3         |
| 33 Riverside       | 4                  | 3              | 1         | 0         |
| 34 Sacramento      | 11                 | 1              | 10        | 0         |
| 35 San Benito      | 1                  | 0              | 0         | 1         |
| 36 San Bernardino  | 12                 | 3              | 7         | 2         |
| 37 San Diego       | 2                  | 0              | 0         | 2         |
| 39 San Joaquin     | 1                  | 0              | 0         | 1         |
| 40 San Luis Obispo | 1                  | 0              | 0         | 1         |
| 41 San Mateo       | 6                  | 1              | 3         | 2         |
| 43 Santa Clara     | 2                  | 1              | 0         | 1         |
| 44 Santa Cruz      | 2                  | 1              | 0         | 1         |
| 47 Siskiyou        | 1                  | 0              | 0         | 1         |
| 49 Sonoma          | 2                  | 0              | 2         | 0         |
| 50 Stanislaus      | 16                 | 5              | 8         | 3         |
| 54 Tulare          | 5                  | 3              | 2         | 0         |
| 56 Ventura         | 3                  | 1              | 1         | 1         |
| 57 Yolo            | 2                  | 0              | 0         | 2         |
| 58 Yuba            | 1                  | 0              | 1         | 0         |
| <b>Total</b>       | <b>161</b>         | <b>56</b>      | <b>72</b> | <b>33</b> |

**Counties reporting no hospital injuries:**

|              |                  |
|--------------|------------------|
| 03 Amador    | 20 Madera        |
| 04 Butte     | 23 Mendocino     |
| 05 Calaveras | 25 Modoc         |
| 09 El Dorado | 26 Mono          |
| 12 Humboldt  | 28 Napa          |
| 15 Kern      | 32 Plumas        |
| 16 Kings     | 38 San Francisco |
| 17 Lake      | 42 Santa Barbara |
| 18 Lassen    | 45 Shasta        |

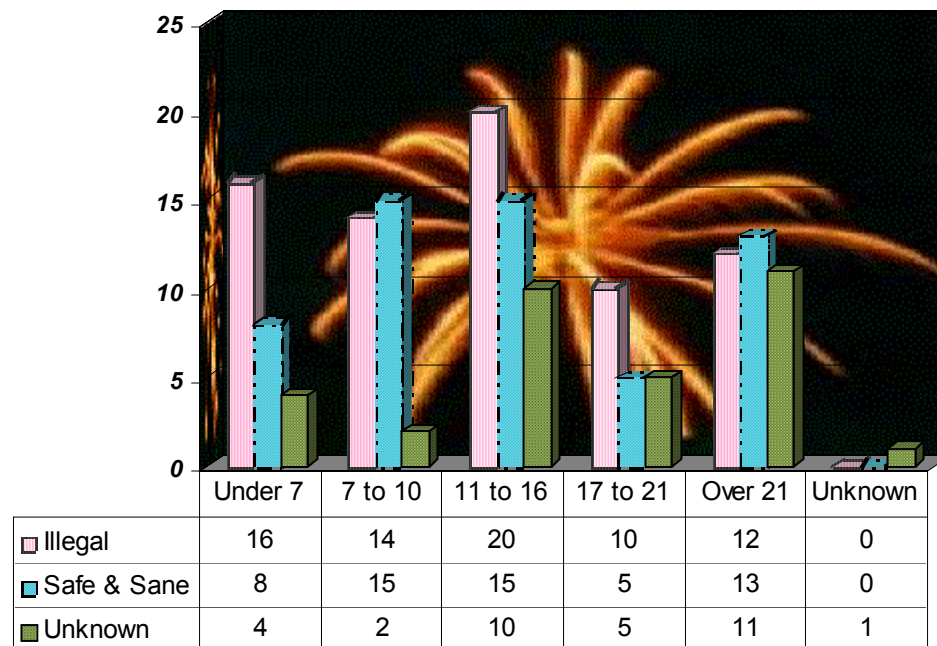
**Counties with no hospitals reporting:**

|             |             |
|-------------|-------------|
| 02 Alpine   | 46 Sierra   |
| 11 Glenn    | 48 Solano   |
| 21 Marin    | 51 Sutter   |
| 22 Mariposa | 52 Tehama   |
| 29 Nevada   | 53 Trinity  |
| 31 Placer   | 55 Tuolumne |

# Hospital Injury Data

## Injuries by Fireworks Classification by Age

June 17 - July 16, 1998



## Hospital Injury Data

### INJURIES BY TYPE OF FIREWORKS DEVICE BY AGE

JUNE 17 THRU JULY 16, 1998

| TYPE OF<br>DEVICE              | TOTAL OF<br>DEVICE | AGE     |        |         |         |         |         |
|--------------------------------|--------------------|---------|--------|---------|---------|---------|---------|
|                                |                    | UNDER 7 | 7 – 10 | 11 – 16 | 17 – 21 | OVER 21 | UNKNOWN |
| Firecracker *                  | 19                 | 1       | 2      | 8       | 2       | 6       | 0       |
| M80, Etc *                     | 11                 | 0       | 0      | 4       | 4       | 3       | 0       |
| Smoke Bombs                    | 7                  | 1       | 1      | 4       | 0       | 1       | 0       |
| Sparkler, Wire Core *          | 6                  | 4       | 2      | 0       | 0       | 0       | 0       |
| Wheel                          | 2                  | 0       | 2      | 0       | 0       | 0       | 0       |
| Party Popper                   | 1                  | 0       | 0      | 0       | 0       | 1       | 0       |
| Sky Rocket with Stick *        | 4                  | 0       | 1      | 1       | 0       | 2       | 0       |
| Bottle Rocket *                | 1                  | 0       | 0      | 1       | 0       | 0       | 0       |
| California Candle (hand held)  | 4                  | 2       | 1      | 0       | 0       | 1       | 0       |
| Roman Candle (shoots balls) *  | 4                  | 0       | 1      | 2       | 1       | 0       | 0       |
| Handle Fountain (hand held) *  | 1                  | 0       | 1      | 0       | 0       | 0       | 0       |
| Unknown (probably thrown)      | 6                  | 0       | 0      | 2       | 1       | 3       | 0       |
| Cone Fountain                  | 4                  | 0       | 1      | 1       | 1       | 1       | 0       |
| Base Fountain                  | 18                 | 1       | 7      | 5       | 2       | 3       | 0       |
| Torpedo (snap caps) *          | 2                  | 1       | 0      | 1       | 0       | 0       | 0       |
| Other                          | 15                 | 5       | 4      | 5       | 1       | 0       | 0       |
| Display, Public                | 5                  | 0       | 0      | 1       | 1       | 3       | 0       |
| Homemade *                     | 6                  | 0       | 1      | 3       | 1       | 1       | 0       |
| Ground Spinner (ground flower) | 9                  | 1       | 1      | 2       | 1       | 4       | 0       |
| Unknown (probably hand held)   | 2                  | 0       | 0      | 0       | 1       | 1       | 0       |
| Unknown (probably rocket)      | 3                  | 0       | 0      | 1       | 0       | 2       | 0       |
| Unknown (unclassified)         | 13                 | 1       | 1      | 4       | 2       | 4       | 1       |
| Sparkler, wooden core *        | 18                 | 11      | 5      | 0       | 2       | 0       | 0       |
| TOTAL BY AGE                   | 161                | 28      | 31     | 45      | 20      | 36      | 1       |

\* Denotes **ILLEGAL** device



## Hospital Injury Data

### INJURIES BY TYPE OF FIREWORKS DEVICE BY BODY PART INJURED

JUNE 17 THRU JULY 16, 1998

| Type<br>Of<br>Device           | Total Body<br>Parts<br>Injured | BODY PARTS   |      |      |     |                           |         |       |     |      |       |
|--------------------------------|--------------------------------|--------------|------|------|-----|---------------------------|---------|-------|-----|------|-------|
|                                |                                | Head<br>Face | Eyes | Neck | Arm | Hand<br>Except<br>Fingers | Fingers | Torso | Leg | Foot | Other |
| Firecracker *                  | 25                             | 4            | 4    | 0    | 3   | 10                        | 0       | 2     | 1   | 1    | 0     |
| M80, Etc. *                    | 18                             | 2            | 0    | 1    | 1   | 4                         | 1       | 1     | 1   | 5    | 2     |
| Smoke Bombs                    | 8                              | 2            | 1    | 0    | 0   | 2                         | 0       | 0     | 0   | 2    | 0     |
| Sparkler, Wire Core *          | 6                              | 1            | 0    | 0    | 2   | 0                         | 2       | 0     | 0   | 1    | 0     |
| Wheel                          | 2                              | 0            | 0    | 0    | 0   | 0                         | 0       | 0     | 0   | 2    | 0     |
| Party Popper                   | 2                              | 0            | 0    | 0    | 1   | 0                         | 0       | 1     | 0   | 0    | 0     |
| Sky Rocket with stick *        | 5                              | 1            | 1    | 0    | 0   | 1                         | 0       | 1     | 1   | 0    | 0     |
| Bottle Rocket *                | 1                              | 0            | 1    | 0    | 0   | 0                         | 0       | 0     | 0   | 0    | 0     |
| California Candle (hand held)  | 6                              | 1            | 0    | 0    | 1   | 3                         | 0       | 0     | 0   | 0    | 1     |
| Roman Candle (shoots balls) *  | 6                              | 0            | 0    | 0    | 1   | 2                         | 0       | 1     | 1   | 1    | 0     |
| Handle Fountain (hand held) *  | 1                              | 0            | 0    | 0    | 1   | 0                         | 0       | 0     | 0   | 0    | 0     |
| Unknown (Probably thrown)      | 7                              | 1            | 5    | 0    | 0   | 1                         | 0       | 0     | 0   | 0    | 0     |
| Cone Fountain                  | 6                              | 1            | 1    | 0    | 0   | 3                         | 0       | 0     | 0   | 1    | 0     |
| Base Fountain                  | 27                             | 6            | 4    | 2    | 3   | 5                         | 1       | 1     | 2   | 3    | 0     |
| Torpedo (Snap caps) *          | 3                              | 0            | 0    | 0    | 0   | 0                         | 0       | 0     | 2   | 0    | 1     |
| Other                          | 27                             | 8            | 3    | 2    | 2   | 3                         | 2       | 1     | 2   | 2    | 2     |
| Display, Public                | 5                              | 1            | 4    | 0    | 0   | 0                         | 0       | 0     | 0   | 0    | 0     |
| Homemade *                     | 8                              | 0            | 0    | 0    | 0   | 3                         | 0       | 1     | 2   | 2    | 0     |
| Ground Spinner (ground flower) | 12                             | 0            | 0    | 1    | 0   | 5                         | 1       | 0     | 2   | 3    | 0     |
| Unknown (Probably hand held)   | 2                              | 0            | 0    | 0    | 1   | 1                         | 0       | 0     | 0   | 0    | 0     |
| Unknown (Probably rocket)      | 4                              | 2            | 1    | 0    | 0   | 1                         | 0       | 0     | 0   | 0    | 0     |
| Unknown (Unclassified)         | 21                             | 2            | 2    | 1    | 3   | 5                         | 2       | 0     | 1   | 5    | 0     |
| Sparkler, Wooden core *        | 22                             | 2            | 9    | 0    | 1   | 3                         | 0       | 1     | 2   | 2    | 2     |
| Total                          | 224                            | 35           | 36   | 7    | 20  | 52                        | 9       | 10    | 17  | 30   | 8     |

FIGURES REFLECT INJURY TO MORE THAN ONE BODY PART FOR SOME INCIDENTS.

\* Denotes ILLEGAL device